

REMARKS

Claims 1-26 are pending in the above-identified application and have been subjected to a Unity of Invention Requirement as follows:

Group I -- claims 1-21 directed to a composition; and

Group II -- claims 22-26 directed to a method of bioregulation in plant cultivation which employs the composition of the claims of Group I.

Response to Unity of Invention Requirement

In response to the Unity of Invention Requirement, Applicant elects the claims of Group I, i.e. claims 1-21. This election is made with a traversal based on the reasons below.

Reasons for Traversal of Requirement

The Office Action of October 31 2007 asserts that subject matter of Group I and Group II identified above do not relate to a single general inventive concept under PCT Rule 13.1 because of an absence of the same or corresponding special technical feature in these claim groups. In support of this assertion the Office Action cites Sauter '326 (USP 5,260,326). In this regard, it is noted that Sauter '326 describes salts of a triazole active ingredient which may be prepared by reacting the triazole with an acid such as acetic acid and glycolic acid.

If a triazole forms a salt with an acid, the molar ratio of triazole to acid is 1:1. According to claim 1, however, the molar ratio of the active ingredient selected from among the triazole class to the straight-chain or branched saturated or unsaturated aliphatic carboxylic acid is greater than 1. This reflects that, according to the present invention, the fact that the carboxylic acid is not a simple salt forming agent. Actually, the carboxylic acid serves as solvent (compare reference example 1 of the application, describing the dissolution characteristics of triazoles in selected carboxylic acids; see also page 25, lines 28-42, describing that the triazole is dissolved in the carboxylic acid).

As a rule, the active ingredients from the triazole class are essentially insoluble in water so that suitable aqueous solutions and, in particular, aqueous concentrates, are particularly difficult to formulate. Moreover, additives are usually added to the formulations in order to stabilize them and/or to potentiate their activity. Frequently, the consequence is that the individual additives and/or active ingredients are incompatible with each other so that unstable formulations are obtained which are disadvantageous owing to the occurrence of opacity, precipitation of the additives or active ingredients or pure storage stability. For example, phase separation, sedimentation or pronounced opacity is frequently observed as a disadvantageous effect. Such an incompatibility of a mixture manifests itself either directly by the development of a two-phase system or, in the long term, brings about a reduced storage stability of the formulations. Under such circumstances it is frequently no longer possible to add to the ready mix all of the desired or required additives, so that the additives must be provided for the user in a separate container. The user then mixes the concentrates with the further additives, dilutes the mixture with water and pours it into the tank or spray tank shortly prior to use. This, however, requires an additional operation. Moreover, safe and optimal use of the crop protection product is not ensured when it is used inadequately and negligently (for example mistakes made during mixing and diluting and the like).

The compositions of the present invention are based on the finding that carboxylic acids are particularly suitable for formulating aqueous solutions of the triazole components. In example 2 of the present application, the homogeneity and storage stability of a number of compositions has been examined. The compositions termed F1-F8, F10, and F11 all comprise an active ingredient from the triazole class (metconazole, epoxiconazole or tebuconazole) and propionic acid. All these compositions are compositions of the present invention (they fall under the scope of current claim 1) whereas the compositions termed F9 and F12-F15 do not comprise a carboxylic acid and thus qualify as comparative examples.

All of the compositions of the present invention were storage-stable. For instance, the compositions F5-F7 were storage-stable and monophasic over 3 months at a temperature regime of 50°C. The comparative composition F9, however, was a 2-phase system with a

heterogeneous solids content in the liquid phase. The comparative compositions F12-F15 further demonstrate that, despite the addition of benzyl alcohol, the absence of the carboxylic acid merely gives 2-phase heterogeneous mixtures which are not applicable.

The skilled person would not have expected that the use of a carboxylic acid as solvent could solve the problem of providing a homogenous storage-stable composition. It is noted that the active ingredients from the triazole class are weak bases (compare page 25, lines 35 and 36, of the application). Likewise, carboxylic acids are known to be weak acids. Weak bases do not form stable salts with weak acids. This is well-known in the art. Therefore, the skilled person had no reason to expect that the carboxylic acid would enhance the solubility of the triazole.

In conclusion, it is submitted that the subject matter of Groups I and II does indeed relate a single general inventive concept. Further, it is submitted that there is no significant undue burden placed on the Examiner to examine the subject matter of both of these claim groups. Consequently, it is requested that the above-noted Requirement be withdrawn.

Response to Election of Species Requirement

In addition to the above, the claims of the present application have also been subjected to an Election of Species Requirement with respect to the species (a)-(e) as noted at page 3 of the Office Action. In response to this Requirement, Applicant hereby provisionally elect the following species:

- (a) R^3 is methyl, R^4 and R^5 are hydrogen, and n is 1 (propionic acid);
- (b) metconazole;
- (c) R^1 and R^2 together denote a radical $-(CH_2)_5-$ and X is an anionic group;
- (d) N,N-dimethylpiperidinium salt of formula (IIIb) wherein X^- is Cl^- (mepiquat chloride); and
- (e) alkylglycosides.

The above-noted Election Requirement is respectfully traversed. It is submitted that the scope of formula (I), as well as formula (III) in claim 11, is relatively small, such that there is no

significant burden placed on the Examiner to examine the full scope of the present claims. Consequently, it is requested that this Election of Species Requirement be withdrawn.

If any questions arise in the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

- ☒ Attached is a Petition for Extension of Time.
- ☒ Attached hereto is the fee transmittal listing the required fees.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

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Respectfully submitted,

By  #32,868

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